Message

From: Kay, Robert [rtkay@usgs.gov]
Sent: 12/30/2013 7:57:54 PM
To: Nordine, John [nordine.john@epa.gov]
Subject: Techalloy Sampling

John--sorry for the delay, I was out sick then on AL.

Regarding the sampling of monitoring wells and residential wells I was asked to provide oversight of at the Techalloy site during November 2013. I was provided with a copy of the sampling plan for these activities by Jack Thorsen. I have a couple of concerns.

1. The sampling plan called for micro-purge type sampling from the monitoring wells using a submersible, Grunfoss type pump. Micro-purge type sampling was performed, but for most of the monitoring wells a peristaltic pump was used. Peristaltic pumps can bias VOC concentrations to the low side due to the negative pressure they induce as part of the purging process. Basically peristaltic pumps should not be used at all, or should not be used at depths to water of greater than about 15-25 ft, depending on who you read. Because the depth to water in these wells is less than about 15 ft, use of the peristaltic pumps may or may not be an issue.

Was this alteration to the sampling plan agreed to by USEPA? When did the change in the type of pumps used occur? If this switch was not done with USEPA's consent, you may wish to re-visit the acceptability of sampling with the peristaltic pumps.

2. The residential wells were sampling in accordance with the sampling plan, but the sampling plan required minimal purging time (about 5 minutes) and measurement of field parameters at the time of sample collection. More commonly residential wells are sampled after 15-30 minutes of purging to provide a better chance of clearing old water from the system before sample collection. In addition field parameters typically are measured, and checked for stability, every 3-5 minutes to further ensure fresh water in the sample. Also, water flow from the spigot is usually reduced toa non-turbulent stream for sample collection. Techalloy's sampling did not have highly agitiated water, but no effort was made to minimize turbulence when the samples were taken. USEPA may wish to explore suggesting Techalloy make these changes to the sampling protocols.